

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the above-identified application.

Listing of Claims:

1. (Currently amended) An isolated nucleic acid comprising a polynucleotide ~~selected from the group consisting of:~~

(1) ~~a first polynucleotide that encodes a polypeptide selected from the group consisting of~~
(i) ~~an SCN5A polypeptide having a histidine, threonine, leucine, arginine and glutamine at amino acid positions 558, 559, 618, 1027 and 1077, respectively,~~

(ii) ~~an SCN5A polypeptide having an arginine, threonine, leucine, arginine and glutamine at amino acid positions 558, 559, 618, 1027 and 1077, respectively,~~

(iii) ~~an SCN5A polypeptide having a histidine, threonine, leucine and arginine at amino acid positions 558, 559, 618 and 1027, respectively, with the amino acid at amino acid position 1077 deleted, and~~

(iv) ~~an SCN5A polypeptide having an arginine, threonine, leucine and arginine at amino acid positions 558, 559, 618 and 1027, respectively, with the amino acid at amino acid position 1077 deleted,~~

(2) ~~a second polynucleotide that is at least 80% identical to the first polynucleotide over the entire length of the first polypeptide and that encodes an arginine at amino acid position 1027,~~

(3) ~~a third polynucleotide that encodes any of the SCN5A polypeptides with a conservative substitution, deletion or rearrangement at one or more non-critical amino acid position and that encodes an arginine at amino acid position 1027, and~~

(4) ~~a fourth polynucleotide that is a complement of the first, second or third polynucleotide that encodes SEQ ID NO:8 or a complement of SEQ ID NO:8.~~

2.-18. (Canceled)

19. (Original) A genetic construct comprising the polynucleotide of claim 1 operably linked to a non-native expression control sequence.

20. (Currently amended) A cell comprising a polynucleotide ~~selected from the group consisting of (1) a polynucleotide that encodes an SCN5A polypeptide having a histidine, threonine, leucine, arginine and glutamine at amino acid positions 558, 559, 618, 1027 and 1077, respectively, (2) a polynucleotide that encodes an SCN5A polypeptide having an arginine, threonine, leucine, arginine and glutamine at amino acid positions 558, 559, 618, 1027 and 1077, respectively, (3) a polynucleotide that encodes an SCN5A polypeptide having a histidine, threonine, leucine and arginine at amino acid positions 558, 559, 618 and 1027, respectively, with the amino acid at amino acid position 1077 deleted, and (4) a polynucleotide that encodes an SCN5A polypeptide having an arginine, threonine, leucine and arginine at amino acid positions 558, 559, 618 and 1027, respectively, with the amino acid at amino acid position 1077 deleted~~ that encodes SEQ ID NO:8 or a complement of SEQ ID NO:8, wherein [[each]] the polynucleotide is operably linked to a non-native expression control sequence.

21.-27. (Canceled)

28. (Currently amended) ~~A cell comprising a polynucleotide that encodes SEQ ID NO:8, wherein the polynucleotide is operably linked to a non-native expression control sequence~~
The cell of claim 20, wherein the polynucleotide comprises nucleotides 1 to 6045 of SEQ ID NO:7.

29. (Original) The cell of claim 20, wherein the cell is from a human embryonic kidney cell line.

30.-51. (Canceled)

52. (New) The nucleic acid of Claim 1, wherein the polynucleotide comprises nucleotides 1 to 6045 of SEQ ID NO:7.